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PLANT PEST INFORMATION UPDATES

April 1986

U.S. Department of Agriculture (USDA)
Animal and Plant Health Inspection Service (APHIS)
Plant Protection and Quarantine (PPQ)

NEW PEST ADVISORY GROUP (NPAG) PLANT PEST ACTIVITY FROM JANUARY THROUGH MARCH 1986

NEW PLANT PESTS

A NEW GRAIN APHID IN THE UNITED STATES

Widespread infestations of an aphid new to the United States has been discovered in Texas. Specimens were collected from wheat on March 25, 1986, about 10 km north of Lubbock, Lubbock County, by W. P. Morrison (Texas Agricultural Extension Service). M. Stoetzel (Systematic Entomology Laboratory, Biosystematics and Beneficial Insects Institute, Agricultural Research Service (SEL, BBII, ARS)) identified the species as Diuraphis noxia (Mordvilko), Homoptera: Aphididae, on March 27, 1986. The NPAG was notified on March 28. Surveys indicated that 10 other Panhandle area counties were also infested as of March 31. More injury appears on dryland than on irrigated wheat.

The NPAG is gathering information to evaluate this aphid. Preliminary reports indicate its presence in the Soviet Union, western Europe, Africa, the Near East, and in Argentina and Mexico. Severe losses were reported in barley and wheat. Preferred hosts are Hordeum (barley), Triticum (wheat), and triticale. Least favored are Avena (oats) and Secale (rye). Other grasses fall between in preference: Agropyron (a wheatgrass), X Agrotriticum (agrotricum), Bromus, and Phleum (timothy). The aphid is also reported to vector brome mosaic virus, barley yellow dwarf virus, barley stripe mosaic virus, and Picornavirus.

Injury appears in circular, discolored areas in fields. A closer look reveals plants with inwardly curled leaves along the long axis with streaks of white, yellow, or purple along the leaf veins, particularly on the flag leaf. Affected leaves may turn brown. Plants tiller less and tillers are dwarfed and uneven in height. Grain heads curl downwards. When curled leaves are unfurled, the aphids are found at the base of the leaf sheath. The aphids prefer the newest tissue. The aphid is basically light green dusted with white, shaped like a long spindle, and with very short antennae, two projections on the rear of the abdomen, and short conelike cornicles.

A LEGUME RUST NEW FOR THE UNITED STATES

A new rust for the United States was detected in Texas on April 28, 1983. Uromyces anthyllidis (Grev.) Schroet. was recovered from Medicago polymorpha (California burclover) at a residence in San Benito, Cameron County, by

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J. Okamura. Two additional detections of U. anthyllidis on the same host were made on February 29 and March 15, 1984, at a residence in Brownsville in this county. Positive identification was made on June 11, 1985, by M. Palm (PPQ) and confirmed by G. B. Cummins (University of Arizona, Tucson). All three collections had been previously identified as U. striatus Schroet. II, III. The NPAG was notified on June 26, 1985.

Hosts include many genera in the Fabaceae. Some of the economic ones are Medicago spp. (including alfalfa), Trifolium (clover), and Vicia (vetch). Its distribution includes the European, Mediterranean, and Australian regions.

An NPAG ad hoc committee evaluated this rust on March 10, 1986. Their recommendations were submitted to Deputy Administrator H. L. Ford (PPQ). Eight points were pertinent.

1-3. G. B. Cummins stated that it was very doubtful that U. anthyllidis would cause any economic damage. The literature rarely mentions this fungus with fewer references to economic damage. M. Priest (New South Wales Biological and Chemical Research Institute) stated that U. anthyllidis is economically similar to U. striatus in causing severe damage during warm, moist conditions. Favorable environmental conditions determine the severity of outbreaks.

4-5. U. striatus is distributed worldwide, spreading by airborne spores. It can be found wherever alfalfa is grown.

6. U. anthyllidis could be easily misidentified as U. striatus.

7. No country is known to restrict imports of hay because of U. anthyllidis.

8. Control can be obtained by using manzate or zineb.

A NEW CHICKPEA RUST

Uromyces ciceris-arietini (Grogn.) Jacz., a rust discovered in Texas, is new to the United States. M. Palm (PPQ) identified it on February 21, 1986. This disease was detected on Cicer arietinum, chickpea, on February 18, 1986, by J. VanValkenburgh (PPQ) in cotton research plots at Brownsville, Cameron County. Chickpea was grown as an attractant for Heliothis species. NPAG is gathering information to evaluate this rust.

NO ACTION FOR A CYST NEMATODE

A nematode possibly new to the United States was collected in Pennsylvania. It was reported to the NPAG on August 5, 1983. This nematode was identified as Heterodera possibly goettingiana Liebscher (Nematoda: Heteroderidae) by A. M. Golden (ARS). No positive identification could be made without all viable stages and without its hosts in that field. Attempts to obtain these have not been successful to date. The field has been in potatoes, oats, clover, alfalfa, and grass. Known as pea cyst nematode in Europe, its hosts include Pisum, Vicia, Lens, and Lathyrus species; clover and alfalfa are reported as nonhosts there.

Mr. Ford directed on March 20, 1986, that the NPAG need not deal with this nematode for the following reasons:

1. Lack of positive identification to species.
2. Pest status of this organism is unknown.
3. The population is decreasing.
4. Control by the State is effective.
5. The State is continuing to monitor this organism.

OLD FUNGUS UNCOVERED

A fungal pathogen that causes a serious fruit rot of strawberry, terminal crook of Monterey pine, and terminal shoot and branch tip necrosis of western hemlock was believed to be exotic to the United States. Recent identifications place Colletotrichum acutatum Simmonds in Arkansas, California, Florida, Louisiana, Mississippi, and Tennessee. Several pathologists agree it has been widespread here for 20 or more years. Previously, this fungus has been misidentified as Colletotrichum fragariae, C. gloeosporioides, and Gloeosporium species. This taxonomic confusion will be clarified in a paper to be published soon. With the above information, Mr. Ford directed that the NPAG does not need to further consider this species as a new pest.

C. acutatum was first identified here in 1982 on strawberry nursery stock from Arkansas and California. B. Smith (ARS, Poplarville, Mississippi) compared isolates with the type culture. Then in 1985, L. Black (Louisiana State University) identified it on peppers from fields in Louisiana and Tennessee. In September 1985, J. Maas (ARS, Beltsville, Maryland) informed PPQ that this species is present in the United States.

SINGLE FRUIT FLY FINDS IN FLORIDA AND CALIFORNIA

A Mediterranean fruit fly (Ceratitis capitata (Wiedemann), Diptera: Tephritidae) was detected in Florida on March 21, 1986. The unmated female was recovered from a Jackson trap in a calamondin tree at Indian Rocks Beach, a seaside area in Pinellas County. H. Denmark (Division of Plant Industry, Florida Department of Agriculture and Consumer Services (DPI, FDACS)), confirmed the identification. Intensive trapping in the 210-sq-km area surrounding the find started on March 22. Host fruits in the 2.6-sq-km area around the site were cut during larval surveys. No additional flies or larvae were detected by March 31.

One melon fruit fly (Dacus cucurbitae Coquillett (Diptera: Tephritidae)) was recovered in California on January 22, 1986. The male was taken from a McPhail trap in an orange tree in Los Angeles. It was confirmed on January 23. Trapping was intensified by January 24. This site is a produce terminal where

products are received under certificate or limited permit. About 30 fruits were cut for larvae with negative results. No additional melon fruit flies were detected as of March 31.

UPDATES ON ACTIONS AGAINST NEW PESTS

CITRUS CANKER ERADICATION CONTINUES

Federal funds are exhausted for the Federal and State citrus canker (Xanthomonas campestris pv. citri (Hasse) Dye) eradication program in Florida. Although Federal participation was scaled back on March 31, 1986, USDA officials remain committed to eradication. Florida intends to continue established regulatory and control programs, and survey and certification of commercial groves and nurseries. Violations involving interstate transportation will continue to be handled by Federal regulatory personnel.

No other citrus canker infestations were found from late December through March. Statewide, general grove and residential surveys have been completed at most field stations. Survey activities settled into routine nursery inspections and followup exposed site surveys.

An intensive statewide survey of 5,936 ha of groves with swingle/citrumelo rootstock was completed by February. Negative results indicate that this susceptible rootstock is not widely infected at the present time.

The Citrus Canker Technical Advisory Committee made several recommendations that were approved by Commissioner D. Conner (FDACS, DPI) and PPQ Deputy Administrator H. Ford. The following policy revisions have overall effects:

1. Base future destruction of exposed plants on risk assessment of biological and cultural factors on an individual basis. Also, plants originating from uninfected blocks of an infested nursery would not necessarily be destroyed in that nursery or wherever they were transplanted but would remain under strict quarantine requirements.
2. Replanting changes include allowing (a) replacement of a minimum of 25 percent of the trees in groves and (b) immediate replanting in infected nurseries in those blocks where plants did not have citrus canker lesions.
3. Resume distribution of registered noncitrumelo budwood from the DPI budwood foundation grove. This grove has not had canker or been exposed.
4. Discontinue pruning green bark and foliage from plants moving from a nursery that has not had citrus canker.
5. Allow fruit to move under permit to Northeastern States from groves near former citrus-canker properties and from groves retaining exposed resets.

EGYPTIAN COTTONWORM INSPECTIONS

Eradication continued for Egyptian cottonworm (Spodoptera littoralis (Boisduval), Lepidoptera: Noctuidae) in a greenhouse operation in Summit County, Ohio (PPIU--January 1986). Plants imported from Israel had been found infested. Weekly treatments started in early January appear to be effective. The last adult was trapped on March 1; no other stage was found this quarter.

Plants imported from Israel from October through December 1985 were traced to another 15 greenhouse operations. This material is being inspected and traps were placed. No specimens have been detected as of March 31.

BLACK PARLATORIA SCALE EXTENSION

Survey in Florida for black parlatoria scale (Parlatoria ziziphi (Lucas), Homoptera: Diaspididae) in Miami, Dade County, resulted in a slight extension of the infested area.

MORE WORK ON PEANUT STRIPE VIRUS

Peanut stripe virus, a virus detected in peanut germplasm in 1982 (PPIU—April 1984), was last reported in a few sites in the South. Eradication from the United States appears less than practical because of such drawbacks as delayed release of improved peanut germplasm, severe setback of peanut breeding programs, and lack of available resources for an effective program. Thus, an NPAG ad hoc committee was called on February 19, 1986, to evaluate the risk of releasing ARS peanut germplasm for planting this spring. The following recommendation, which was submitted on March 5, was approved by Mr. Ford on March 17. PPQ is to promptly discuss the possible options at a meeting of peanut researchers, peanut germplasm breeders, and State regulatory officials to determine the most practical and effective action.

NO ACTION FOR A CHICKPEA BLIGHT

A disease of chickpea caused by Ascochyta rabiei (Passerini) Labrousse appeared in an outbreak in Washington and northern Idaho (PPIU—October 1984). Spreading primarily by infected seed, the fungus first appeared in the United States in 1983 in ARS experimental plots in Pullman, Washington. It was later detected in 1984 in Clearwater and Nez Perce Counties of northern Idaho. In 1985, this fungus infected research plots and commercial fields in Washington and Idaho but not so severely as in 1984 due to the dry weather.

Mr. Ford directed on February 27, 1986, that NPAG does not need to further consider A. rabiei for four reasons.

1. Chickpeas are not an economically significant crop to the U.S. agricultural economy. Less than 2,300 ha of land were planted in 1985.
2. This host specific fungus is not expected to infect other crops.

3. The States have taken appropriate actions. Idaho and Washington are screening seedlots and practicing cultural controls i.e., plowing deep and not planting the host in acreage infected by A. rabiei for at least 3 years.

4. Disease severity is related to environmental factors. The disease manifests itself and causes damage only when conditions are wet for an appropriate period.

NO ACTION FOR EUCALYPTUS BORER

Eucalyptus borer, Phoracantha semipunctata (Fabricius), Coleoptera: Cerambycidae, was detected infesting eucalyptus trees in southern California in 1984 (PPIU--January 1986). An analysis of its potential was submitted to Mr. Ford on March 5, 1986. He directed on March 13 that the NPAG does not need to further consider this species for two reasons.

1. Agricultural losses from this pest compared to the total agricultural economy of the United States is minuscule.

2. Literature indicates that P. semipunctata feeds on dead or dying trees and may be beneficial in this respect. It may sometimes feed on stressed or very young trees and may, in part, bring about the mortality of the trees.

Please telephone identifications of plant pests new to the United States to the NPAG Executive Secretary on (301) 436-7472. Information may also be sent to the NPAG Executive Secretary, Biological Assessment Support Staff, National Program Planning Staff, PPQ, APHIS, USDA, Room 633, Federal Building, Hyattsville, MD 20782. Comments improving this report are appreciated. Corrections of a substantive nature will be noted.